

| TARGET DETECTION EXERCISE SCORECARD   |      |       |   |           |               |                   |      |   |                 | SNIPER'S NAME |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|---|------|-------|---|-----------|---------------|-------------------|------|---|-----------------|---------------|--------|---|---|---|---|-----|------|-------|-------|-----------|---------------|-------------------|------|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|---|--|--|--|--|--|--|--|---|---|---|--|--|--|--|--|---|--|--|--|--|--|--|--|---|--|---|---|--|--|--|--|---|--|--|--|--|--|--|--|---|--|--|---|---|--|--|--|---|--|--|--|--|--|--|--|----|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| For use of this form, see FM 3-22.10; the proponent agency is TRADOC.   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| SKETCH NAME   |      |       |  |           |               | SKETCH NO.<br>OF  |      |   | EXERCISE NUMBER |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| GRID COORD  |      |       |   |           |               | BLOCK SCALE       |      |   | TARGET AREA     |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| WEATHER   |      |       |   |           |               | MAGNETIC AZIMUTH  |      |   | WIDTH:          |               | DEPTH: |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| DATE (YYYYMMDD) TIME  |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| <table border="1"> <thead> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>F</th><th>G</th><th>H</th><th>I</th><th>J</th><th>K</th><th>L</th><th>M</th><th>N</th><th>O</th><th>P</th><th>Q</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2</td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>3</td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>4</td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6</td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>7</td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>8</td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>9</td></tr> <tr><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr> </tbody> </table> |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | A   | B    | C     | D     | E         | F             | G                 | H    | I | J | K | L | M | N | O | P | Q | 1 |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   | 1 | 2 |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  | 2 | 3 |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  | 3 | 4 |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  | 4 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 | 6 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 | 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 7 | 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8 | 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 9 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| A   | B    | C     | D   | E         | F             | G                 | H    | I | J               | K             | L      | M | N | O | P | Q   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 1   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 1   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 2   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 2   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 3   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 3   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 4   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 4   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 5   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 5   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 6   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 6   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 7   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 7   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 8   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 8   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 9   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 9   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 0   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | 0   |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| <table border="1"> <thead> <tr> <th>NO.</th><th>SIZE</th><th>SHAPE</th><th>COLOR</th><th>CONDITION</th><th>APPEARS TO BE</th><th>GRID BOX LOCATION</th><th>SIDE</th> </tr> </thead> <tbody> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>  |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   | NO. | SIZE | SHAPE | COLOR | CONDITION | APPEARS TO BE | GRID BOX LOCATION | SIDE | 1 |   |   |   |   |   |   |   | 2 |   |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  | 4 |   |   |  |  |  |  |  | 5 |  |  |  |  |  |  |  | 6 |  |   |   |  |  |  |  | 7 |  |  |  |  |  |  |  | 8 |  |  |   |   |  |  |  | 9 |  |  |  |  |  |  |  | 10 |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| NO.   | SIZE | SHAPE | COLOR   | CONDITION | APPEARS TO BE | GRID BOX LOCATION | SIDE |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 1   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 2   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 3   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 4   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 5   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 6   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 7   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 8   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 9   |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 10  |      |       |   |           |               |                   |      |   |                 |               |        |   |   |   |   |     |      |       |       |           |               |                   |      |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |   |   |   |  |  |  |  |  |   |  |  |  |  |  |  |  |   |  |   |   |  |  |  |  |   |  |  |  |  |  |  |  |   |  |  |   |   |  |  |  |   |  |  |  |  |  |  |  |    |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |